

# **REDUCING NEONATAL STAPHYLOCOCCAL INFECTIONS IN BANSO BAPTIST HOSPITAL(BBH) OB UNIT.CAMEROON, WEST AFRICA**

By: Nkwan Jacob.  
Infection Control Nurse, BBH

# INTRODUCTION

- Infection Control is a real challenge to facilities with limited resources like Banson Baptist Hospital
- Most people believe the program is expensive to run and so not necessary.
- Some question whether infection control programs are affordable and/or cost effective in resource-limited settings.

# BACKGROUND

- BBH is a tertiary referral mission hospital run by the Cameroon Baptist Convention Health Board(CBCHB) in the Northwest Province.
- The maternity ward is often overcrowded.
- There is a cultural practice of applying Vaseline on babies' skin after each bath, because of a common perception that babies' skin become too dry.

# BACKGROUND cont, why start infection control in BBH?

- Frequent out breaks of neonatal skin pustules (septic spots) and occasional systemic deep tissue infections, leading to neonatal morbidity and mortality.
- Risky equipment, (e.g. mouth operated suction and pipettes), high incidence of HIV and needle stick injuries among staff, no PEP to manage exposures.
- Multiple reuse of equipment without adequate disinfection procedures, etc, etc etc.

# Investigations, Started 2002, the problems

- Multiple staff were scooping Vaseline with ungloved hands from a common source (the “Evil soap dispenser”)
- Staff used Vaseline from the same source to rub their hands.



# Investigations cont.

- There were only 4 hand washing points in the entire labor, delivery and 30-bed postpartum areas for both staff and patients.
- Multiple babies were sharing common items such as soap, bath basins etc.
- Nurses were moving from bed to bed changing dressings, etc, without wearing gloves, and/or washing hands.

# METHODS

- Culture of Vaseline from the Evil soap dispenser grew penicillin-resistant *Staphylococcus aureus* and *Pseudomonas*.
- Several infants' pustules and one septic joint aspirate also grew *S. aureus*.

# METHODS continued

- The nurses recorded cases of septic spots in a register, and I collected , synthesized, analyzed and interpreted them at the end of each month to the unit staff and administration for a total of 26 months.

# INTERVENTIONS

- Work shops on hand hygiene :90% of staff and most patients attended .
- Use of individual bar soaps and bath basins for each mother/baby
- Mother to bring and apply their own Vaseline at bed side,if they wish ( no sharing with other moms)
- 3 portable hand washing points added for a total of 7

# CBCHB CP- manufactured alcohol hand rub solution

- 2ml glycerine in 100ml 70–90% alcohol.
- Distributed in most hospital departments in user-friendly squirt containers for staff use.
- Staff were allowed to wash hands or use alcohol hand rub solution.
- Choice limited if hands were visibly soiled.\*

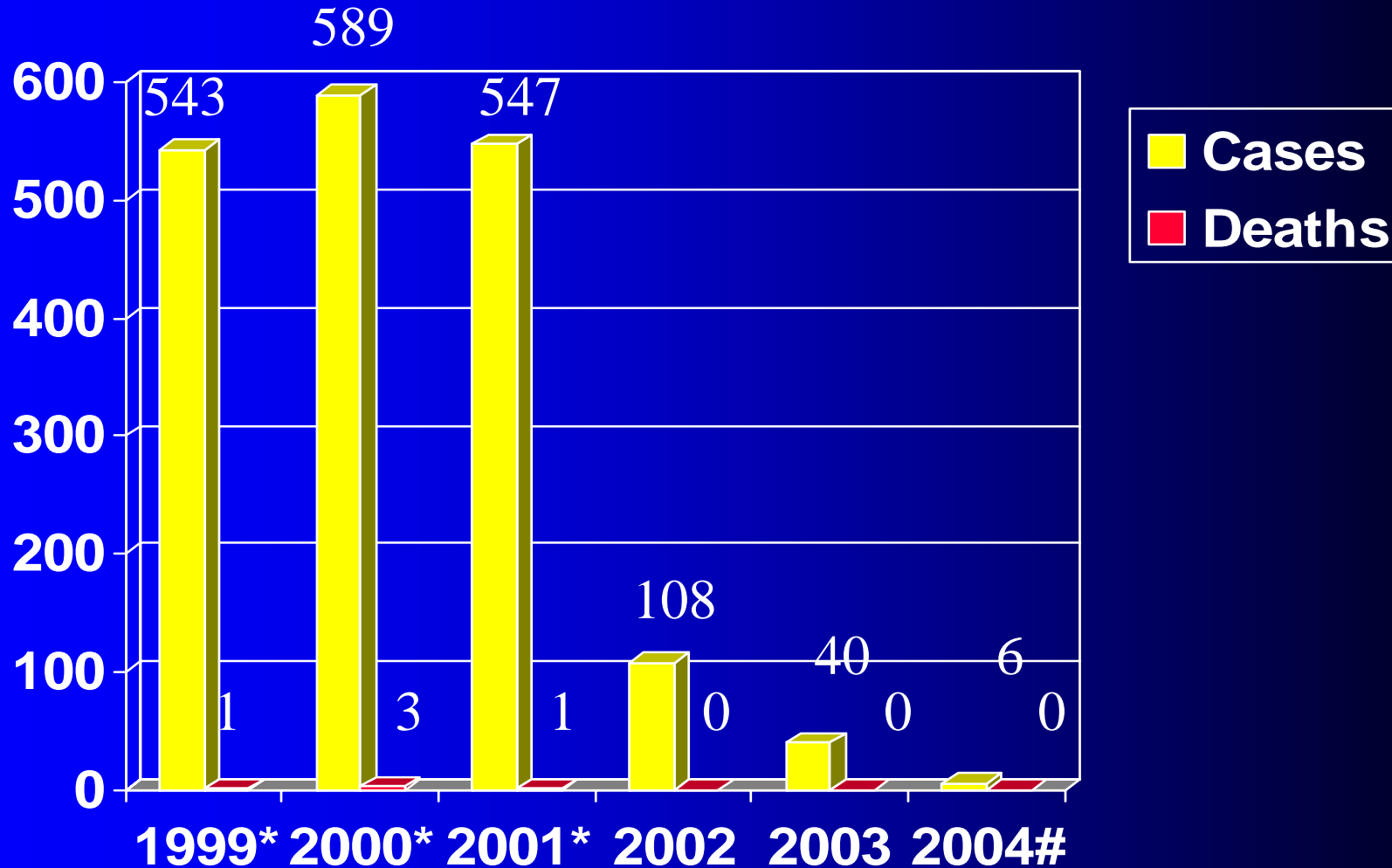


# Interventions continued

- A 5- gallon plastic bucket with a tight-fitting lid placed on a 2-level stand with a basin underneath to collect waste water



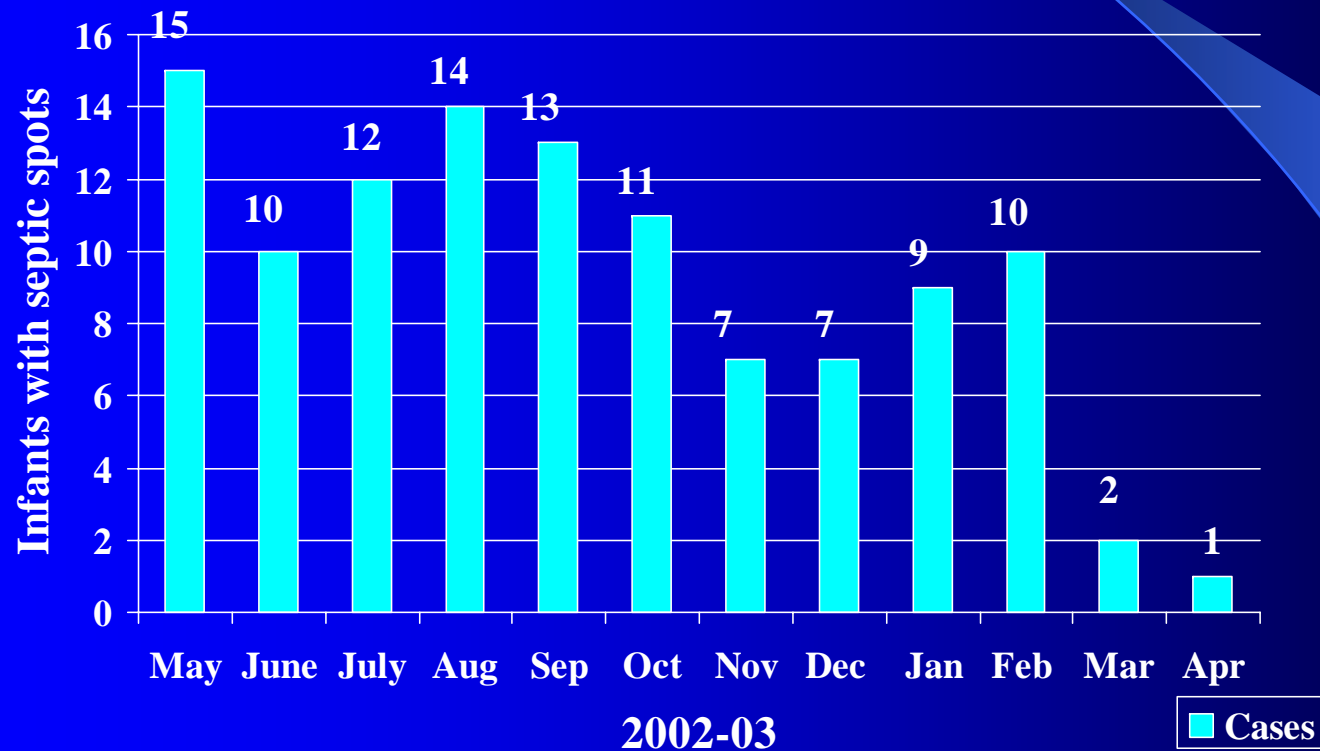
## Neonatal Staph Infections Before and After interventions Started in 2002, Banson Baptist Hospital Maternity Ward



\*Estimated number of cases by head nurse

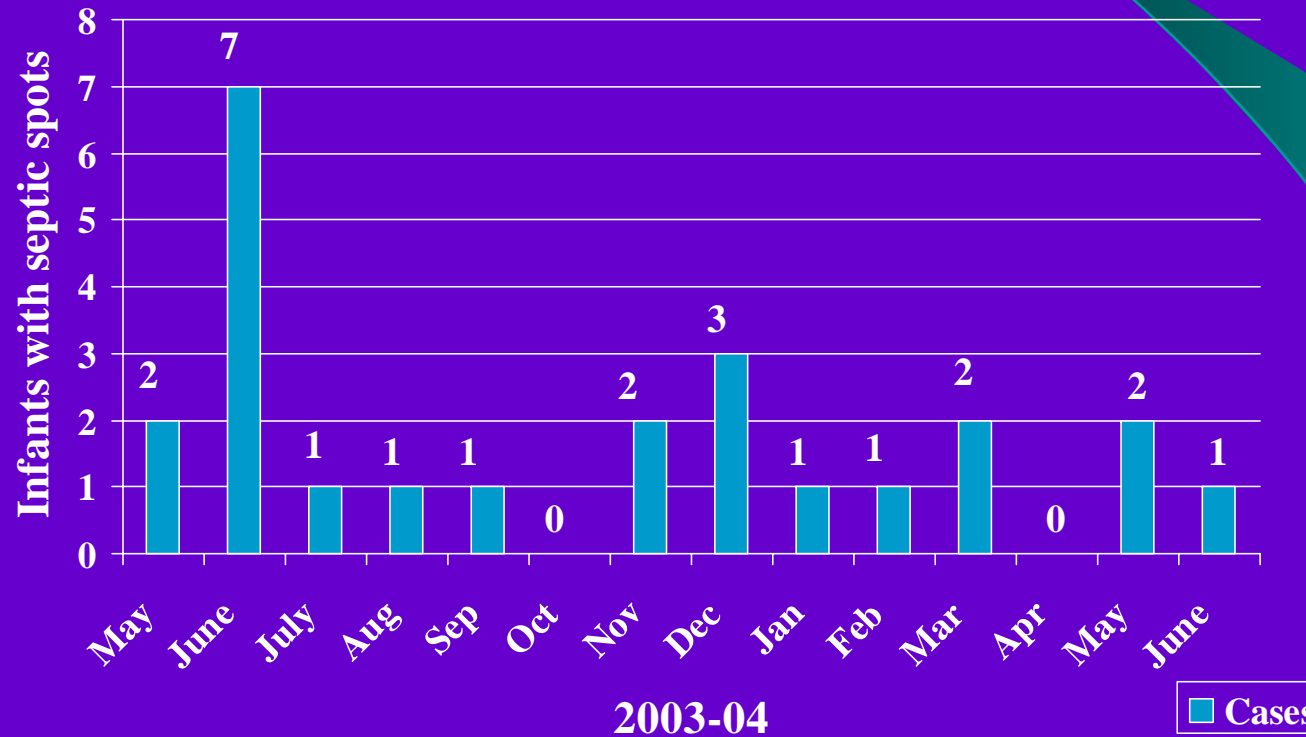
#Jan-June 2004

# BANSO BAPTIST HOSPITAL NUMBER OF INFANTS WITH SEPTIC SPOTS 2002-2003



**May 2002 "Evil soap dish" removed**

# BANSO BAPTIST HOSPITAL NUMBER OF INFANTS WITH SEPTIC SPOTS 2003-2004



# CONCLUSIONS/LESSONS

- When the common “dip-in” Vaseline source was removed and hand hygiene improved cases fell a colossal 80%. From January to June 2004 only 6 cases have been seen.
- Hand hygiene, no matter how simple, remains the most effective precaution against infection transmission even in resource limited settings like BBH
- Infection control is cost effective and saves lives
- Infection control is convenient and practical.

- AS in other aspects of newborn care, we do not need high technology, or expensive equipment/drugs. It is not “ROCKET SCIENCE”. It is the dedicated and persistent application of simple, sustainable, practical hygiene techniques that save lives of the smallest, most vulnerable and most precious of our patients.

# CHALLENGES

- Limited resources: personnel and equipment(e.g. hand wash basins,autoclave,modern maternity unit etc)
- Minimal health budget
- Behavioral change.
- Limited expertise.
- Few opportunities for training.
- Absence of infection control programs in most facilities in Cameroon.

# References

- Didier Pittet et al. Effectiveness of a hospital-wide programme to improve compliance with hand hygiene. LANCET 2000; 356, 1307-12
- Ignaz Semmelweiss (1818-1865)!

# Acknowledgements

1. Elizabeth Glaser Paediatric Aids Foundation
2. Edith Welty MD, and Tom Welty MD
3. Fombe Justin, LAP Nurse
4. Prof. Tih Pius Muffih, Director, CBCHB
5. Staff & Mothers, OB Unit, BBH